

**REMARKS**

Claims 1, 3-10, 12-36, 38-50, and 52-59 are presently pending, of which claims 1, 30, 44, and 59 are independent. In the Office Action, claims 1, 3-10, 12-36, and 52-59 were rejected. Applicants amend claims 30 and 50 herein to address minor grammatical formalities. Applicants respectfully request reconsideration of the outstanding rejections in view of the comments set forth below.

**I. Claim Rejections under 35 U.S.C. §102(b)**

In the Office Action at page 3, first paragraph, claims 1, 3-6, 25, 28, 56, and 59 were rejected under 35 U.S.C. §102(b) as being anticipated by Patent Application Publication No. 2003/0001896 to Johnson (hereafter “Johnson”). Applicants respectfully traverse the rejection.

**A. Claims 1, 3-6, 25, 28, and 56**

Independent claim 1 recites:

1. A computer readable storage medium storing computer executable instructions that when executed on a processor manage a graphical interface, the medium storing:

instructions for providing a graphical interface, a hardware device and a software device being accessible through the graphical interface, the software device being accessible to a computer;

instructions for providing at least one interactive hardware object accessible to the computer, where the hardware object represents the hardware device and is depicted in the graphical interface, the hardware object interacting with the hardware device;

instructions for providing a software object, wherein the software object is representative of the software device, where the software object is depicted in the graphical interface and is configured to be interactive with the software device;

instructions for receiving, from a user, a plurality of configurations of the hardware device, each configuration allowing the user to edit at least one property of the hardware object;

instructions for displaying the plurality of configurations simultaneously, wherein each configuration corresponds to a unique hardware object that represents the hardware device;

*instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations; and*

*instructions for communicating with the hardware device corresponding to the selected configuration using the selected configuration.*

Applicants respectfully submit that Johnson fails to disclose at least *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations* and *instructions for communicating with the hardware device corresponding to the selected configuration using the selected configuration*, as recited in claim 1. Specifically, Johnson does not allow a user to select (at most) a single configuration from among the plurality of configurations for communicating with the hardware device.

Johnson is generally directed to a system for specifying measurement tasks. In specifying a measurement task, a user may set properties for, for example, a number of channels used by the device (Johnson at Figure 26). The user specifies information about the channels, and then each of the channels are used in the measurement task.

In contrast, claim 1 recites *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations*. Claim 1 allows a user to specify a plurality of potential configurations for a hardware device, and select a single configuration from among the plurality of configurations for communicating with the device (Specification at page 5). The Examiner points to the drop-down menus of Johnson, which allow a user to select a scaling operation to be applied to data, for this feature. However, the Examiner changes the interpretation of a “configuration” within the Office Action. For the first six clauses of claim 1, the Examiner interprets a “configuration” as the configuration of a channel of the hardware device. For the last two clauses of claim 1, however, the Examiner changes the interpretation of a “configuration” to mean a scaling function applied to data collected from the hardware device.

The present rejection is a 35 U.S.C. §102(b) rejection. In order to anticipate a claim under 35 U.S.C. §102(a), (b), and (e), the elements of the cited reference must be arranged as required by the claim (MPEP at §2131). Claim 1 recites “a configuration” *allowing the user to edit at least one property of the hardware object, wherein each configuration corresponds to a unique hardware object that represents the hardware device, where at most one configuration is selected by a user, and that the selected configuration is used to communicate with the hardware device*.

Accordingly, in order for the reference to anticipate claim 1, the “configuration” of the reference must be arranged as recited in the claim – that is, the “configuration” must meet each

of the requirements for a configuration recited in claim 1 (see *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989), stating “the identical invention must be shown in as complete detail as is contained in the ... claim;” see also *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987), stating “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference”).

More specifically, the Examiner changes the definition of what constitutes a “configuration” between pages 3 and 5 of the Office Action. At pages 3, 4, and the top half of 5, the Examiner interprets the channel configuration panel of Johnson as a panel for specifying a configuration, and the Examiner treats the entire configuration of each channel as a “configuration” (see, e.g., last paragraph at page 4, interpreting the “channel configuration panel” for the “indicated channels” as a plurality of configurations allowing the user to edit properties of the hardware object). This is the same interpretation as given in previous Office Actions.

Applicants previously amended the claims to clarify that the individual channel configurations were not the “configurations” of the present claims. Specifically, Applicants amended the claims to recite *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations*. As the Examiner has previously recognized, if the channel configurations are interpreted to be the configurations of claim 1, then “each hardware device requires a plurality of configurations to be set in order to operate” (April 28, 2009 Advisory Action at page 2, first paragraph, last sentence). Accordingly, Applicants argued that a user could not select at most one configuration from among the plurality of channel configurations, as the hardware device requires a plurality of configurations in order to operate.

In the present Office Action, the Examiner continues to interpret the configuration of a channel as a configuration for the purposes of the first six clauses of the claim. However, for the last two clauses of the claim, the Examiner changes his interpretation to say that a “configuration” is selected from the drop-down menu entitled “Custom Scale” (Office Action at pages 5 and 31). This is different from the interpretation of a “configuration” used to reject the previous six clauses of the claims.

The items depicted in the Custom Scale dropdown box do not fulfill several of the requirements for a configuration recited in claim 1, such *displaying the plurality of configurations simultaneously, wherein each configuration corresponds to a unique hardware object that represents the hardware device*. In the Examiner's example, the alleged configurations in the drop-down menu do not correspond to a unique hardware object that represents the hardware device. Instead, the menu elements are different scaling functions that may be applied to acquired data. They do not correspond to a unique hardware object. In the present specification, a hardware object "is representative of a hardware device and is depicted in the graphical interface. The hardware object is configured to be interactive with the hardware device and to enable communication between the graphical interface and the hardware device" (see, e.g., present specification at page 3, lines 10-13, and page 5, line 24 through page 6 line 4). Johnson is silent with respect to hardware objects, and the custom scale options do not qualify as hardware objects.

Further, the Examiner asserts that the use of the custom scaling drop-down menu reads on the claim features of *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations* and *instructions for communicating with the hardware device corresponding to the selected configuration using the selected configuration* (Office Action at page 5). Applicants respectfully disagree. The drop-down menu depicted in Figures 19 and 20 of Johnson allows a user to apply a scaling function to data acquired from a channel (Johnson at col. 22, lines 5-8; col. 33, lines 57-62; and col. 34, lines 45-67). Scaling of data occurs when a the scaling function is applied to acquired data. In Johnson, the scaling functions are not used to communicate with a hardware device on behalf of a user, because the data configuration is unrelated to the device configuration. That is, the data is scaled after it is acquired – Johnson does not communicate with the hardware device using the selected configuration. The selected scaling function is used after Johnson's program has already received signals from the channel of the hardware device.

In summary, the Examiner may not change the interpretation of what constitutes a "configuration" depending on which element of the claim is under consideration. Either the channel configuration represents the "configuration" of claim 1, in which case Johnson fails to anticipate the present claims because a user cannot select at most one configuration from among

the plurality of configurations, or the scaling function represents the “configuration” of claim 1, in which case Johnson fails to anticipate the present claims because the configuration does not correspond to a unique hardware object and is not used to communicate with the hardware device.

For at least the reasons identified above, Johnson does not disclose each and every feature of claim 1. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claim 1 under 35 U.S.C. § 102(b).

Claims 3-6, 25, 28, and 56 depend from independent claim 1 and, as such, incorporate all of the features of claim 1. Accordingly, claims 3-6, 25, 28, and 56 are allowable for at least the reasons set forth above with respect to claim 1. Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 3-6, 25, 28, and 56 under 35 U.S.C. § 102(b).

**B. Claim 59**

Independent claim 59 recites:

59. A computer readable storage medium storing computer executable instructions that when executed on a processor manage a graphical interface, the medium storing:

- instructions for providing a graphical interface, at least one hardware device and one software device being accessible through the graphical interface, the graphical interface being updated in response to a change in the hardware device or the software device;

- instructions for providing a plurality of hardware objects accessible to the computer, where each of the hardware objects represents a hardware device and is depicted in the graphical interface, each hardware object configured to be interactive with the hardware device;

- instructions for providing a plurality of software objects, each representative of a software device accessible to the computer, where each of the software objects is depicted in the graphical interface and is configured to be interactive with the software device;

- instructions for providing a plurality of configurations of the hardware object, each configuration allowing the user to edit at least one property of the hardware object;

- instructions for displaying the plurality of hardware objects and the plurality of software objects and at least one of the plurality of configurations of one of the hardware objects or one of the software objects to a user in a single graphical interface simultaneously;

*instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations; and instructions for communicating with the hardware device corresponding to the selected configuration using the selected configuration.*

Applicants respectfully submit that Johnson does not disclose at least *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations* and *instructions for communicating with the hardware device corresponding to the selected configuration using the selected configuration*, which are present in claim 59. As noted above in relation to claim 1, the Examiner impermissibly uses a different interpretation of a “configuration” depending on which element of the claim is under consideration. Under the Examiner’s first interpretation, a user cannot select at most one configuration from among the plurality of configurations. Under the Examiner’s second interpretation, the alleged configurations do not correspond to a unique hardware object and are not used to communicate with the hardware device.

Johnson does not disclose each and every feature of claim 59. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 59 under 35 U.S.C. §102(b).

## **II. Claim Rejections under 35 U.S.C. §103(a)**

Claims 7-10, 12-24, 26-27, 29, 34-35, 38-43, 48-49, and 52-55 have been rejected under 35 U.S.C. §103(a). Applicants respectfully traverse the rejections.

### **A. Claims 7, 8 and 12-14**

Claims 7, 8, and 12-14 have been rejected under 35 U.S.C. §103(a) as being obvious under Johnson in view of U.S. Patent Application No. 2003/0035008 to Fuller et al. (hereafter “Fuller”). Applicants respectfully traverse the rejection.

Claims 7, 8 and 12-14 depend from claim 1 and, as such, include each and every feature of claim 1. As previously discussed in connection with claim 1, Johnson does not disclose or suggest *instructions for receiving, from a user, a selection of at most one configuration from*

**the plurality of configurations** and ***instructions for communicating with the hardware device corresponding to the selected configuration using the selected configuration.***

Fuller also does not disclose or suggest the above-quoted features of claim 1. Fuller discusses a system and method for querying message-based instruments automatically and/or graphically parsing the responses, and generating code that encapsulates the connection/communication with the instrument and the parsing of the response (Fuller at paragraph [0019]). Fuller does not provide ***instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations***, but rather allows the user to enter only one configuration at a time. Hence, no selection is made from among a plurality of configurations. For example, Fuller at [0024] describes how “code may also be generated to call and execute the saved configuration.” This step allows a user to recall a single configuration for a device, and does not display more than one configuration simultaneously, which is present in claim 1.

Fuller and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 1. Therefore, Fuller and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claims 7, 8 and 12-14.

## **B. Claims 9 and 10**

Claims 9 and 10 have been rejected under 35 U.S.C. §103(a) as being obvious under Johnson in view of U.S. Patent Application No. 2003/0001896 to Hsiung et al. (hereafter “Hsiung”). Applicants respectfully traverse the rejection.

Claims 9 and 10 depend from claim 1 and, as such, include each and every feature of claim 1. Johnson does not disclose or suggest ***instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations***, which is present in claim 1.

Hsiung also does not disclose or suggest this feature. Hsiung discusses a technique for processing information or data over a network of computers.

Hsiung further discusses a system for monitoring and controlling a process, or both monitoring and controlling a process, [0007]. The system illustrated in Hsiung includes an input module for receiving a plurality of parameters from a process for manufacture of a substance or object. Hsiung is silent as to receiving any configurations, and hence does not disclose or suggest *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations*.

Thus Hsiung and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 1. Therefore, Hsiung and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claims 9 and 10.

**C. Claim 15**

Claim 15 has been rejected under 35 U.S.C. §103(a) as being obvious under Johnson in view of Fuller and Hsiung. Applicants respectfully traverse the rejection.

Claim 15 depends from claim 1 and, as such, includes each and every feature of claim 1. Johnson does not disclose or suggest *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations*, which is present in claim 1.

As discussed above in II.A and II. B., Fuller and Hsiung each do not disclose or suggest this feature. Thus Fuller, Hsiung and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 1. Therefore, Fuller, Hsiung and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 15.

**D. Claims 16-17 and 27**

Claims 16-17 and 27 have been rejected under 35 U.S.C. §103(a) as being obvious under Johnson in view of U.S. Patent Application No. 2003/0004670 to Schmit et al. (hereafter “Schmit”). Applicants respectfully traverse the rejection.

Schmit discusses one or more measurement devices comprising a measurement hardware device, a virtual measurement device or other type of device. (Schmit at [0013]). Schmit further

indicates that a graphical user interface presents a list of available devices and corresponding channels appropriate for the indicated measurement type, where each of the channels corresponds to a terminal of a corresponding device. (Schmit at [0016]). Schmit further indicates that if the selected measurement type were voltage, the devices listed may be those devices available to the system which are suitable for measuring a voltage. (Schmit at [0136]).

Claims 16, 17 and 27 depend from claim 1 and, as such, include each and every feature of claim 1. Johnson does not disclose or suggest *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations*, which is present in claim 1.

Schmit also does not disclose or suggest this feature. Schmit does not allow for *a plurality of configurations* of a hardware object, and hence does not allow a user to select at most one configuration from among the plurality of configurations. (Schmit at [0013]). On the contrary, Schmit states “the purpose [of the configuration tool architecture] is to present the user with the ability to configure exactly what their application does ... and then build a single task that encompasses all of this information.” (Schmit at [0240]). Schmit allows a user to specify a single configuration, and is not concerned with specifying a plurality of configurations, nor selecting a single configuration from among the plurality of configurations. Accordingly, Schmit does not disclose *receiving, from a user, a selection of at most one configuration from the plurality of configurations*.

Thus Schmit and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 1. Therefore, Schmit and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claims 16, 17 and 27.

**E. Claims 18-24 and 26**

Claims 18-24 and 26 have been rejected under 35 U.S.C. §103(a) as being obvious under Johnson in view of Hsiung, and U.S. Patent Application No. 2003/0056018 to Pike et al. (hereafter “Pike”).

Claims 18-24 and 26 depend from claim 1 and, as such, include each and every feature of claim 1. Johnson and Hsiung do not disclose or suggest *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations*, which are present in claim 1.

Pike also does not disclose or suggest this feature. In particular, Pike does not disclose or suggest *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations*.

Pike discusses receiving a first creation command from a user interface and establishing a communication channel linking the command interpreter and the control instrument independent of the interface bus or interface hardware driver type. (Pike at [0004]). Pike indicates a GUI that displays information regarding the configuration of the various communication channels the user may establish in response to user commands. (Pike at [0036]).

In contrast to claim 1, Pike states “the GUI 14 displays information regarding the configuration of the various communication channels the user 30 may establish in response to user commands” (Pike at [0036]). This indicates that Pike displays a single configuration for each hardware or software device, and not a plurality of configurations. Accordingly, Pike does not allow a user to make a selection of at most one configuration from the plurality of configurations, which is present in claim 1.

Thus Pike, Hsiung and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 1. Therefore, Pike, Hsiung and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claims 18-24 and 26.

#### **F. Claim 29**

Claim 29 has been rejected under 35 U.S.C. §103(a) as being obvious under Johnson in view of U.S. Patent No. 5,986,653 to Phathayakorn et al. (hereafter “Phathayakorn”). Claim 29 depends from claim 1 and, as such, includes each and every feature of claim 1. Johnson does not

disclose or suggest *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations*, which is present in claim 1.

Phathayakorn discusses a method for signaling and acknowledging events associated with resource object organized in a foldable object tree displayed by a GUI. Phathayakorn further indicates that a foldable object tree allows a part of the tree to be folded into its parent object, (Col. 1, lines 55-60).

Phathayakorn also does not disclose or suggest this feature. Phathayakorn describes displaying data relating to signaling and acknowledging events associated with a resource object. (Phathayakorn at col. 1 lns. 55-60). Phathayakorn is concerned with the objects as they actually exist, not potential configurations that a user might want to select. Therefore, Phathayakorn does not disclose *instructions for receiving, from a user, a selection of at most one configuration from the plurality of configurations*.

Thus Phathayakorn and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 1. Therefore, Fuller, Hsiung and Phathayakorn in any reasonable combination, do not disclose or suggest each and every feature of claim 29.

In light of the above remarks, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 7-10, 12-24, 26-27, 29, 34-35, 38-43, 48-49, and 52-55 under 35 U.S.C. §103(a).

**G. Claims 30-33, 36, 42-43, and 57**

Claims 30-33, 36, 42-43, and 57 were rejected under 35 U.S.C. §103(a) as being obvious over Johnson in view of U.S. Patent No. 6,185,491 to Gray (hereafter “Gray”). Applicants respectfully traverse the rejection.

Independent claim 30 recites:

30. A method for managing an interface, the method comprising:  
*providing a graphical interface that provides interaction with an array-based environment*, a hardware device and a software device being accessible through the graphical interface, the software device being accessible to a computer;

providing at least one hardware object accessible to the computer, where the hardware object represents the hardware device and is depicted in the graphical interface, the hardware object configured to be interactive with the hardware device;

providing at least one software object, representative of the software device, where the software object is depicted in the graphical interface, and is configured to be interactive with the software device and;

***updating the graphical interface when the hardware object or the software object are changed in the array-based environment***; and

displaying the hardware object and the software object to a user.

Applicants respectfully submit that Johnson and Gray, alone or in any reasonable combination, do not disclose at least ***providing a graphical interface that provides interaction with an array-based environment*** nor ***updating the graphical interface when the hardware object or the software object are changed in the array-based environment*** which are present in claim 30.

Applicants have previously argued that Johnson does not disclose or suggest ***providing a graphical interface that provides interaction with an array-based environment***. In the Office Action at page 19, the Examiner argues that Johnson discloses this feature of claim 30 at paragraph [0125]. In the cited paragraph, Johnson discusses the generic use of a graphical user interface. There is no mention of an array-based environment, or interacting with an array based environment. Nothing in the sections highlighted by the Examiner at page 19 of the Office Action is related to an array based environment. The Gray reference is also silent with respect to an array based environment. Although Gray references a “data structure” that includes device entries, there is no indication that the data structure is provided in an array-based environment.

Further, the Examiner appears to recognize that Johnson does not disclose ***updating the graphical interface when the hardware object or the software object are changed in the array-based environment*** (although the Office Action at page 21 states “Johnson does disclose updating ...” this appears to be a typographical error, as the Examiner goes on to discuss why Gray discloses this feature and why it would have been obvious to incorporate the feature into the Johnson reference). However, Gray also does not disclose or suggest ***updating the graphical interface when the hardware object or the software object are changed in the array-based environment***.

First, as noted above, Gray is silent with respect to an array-based environment. Accordingly, there can be no change to a hardware or software object in an array-based environment in Gray.

Second, Gray does not disclose or suggest updating the graphical interface when the hardware object or the software object are changed. In the cited passage of Gray, a hardware device, such as a CD player, is uninstalled from a vehicle and a database of vehicle devices is updated. The cited passage does not mention updating a graphical interface when the device is removed.

Further, as applicants have previously argued, there is a difference between the hardware object and the hardware device. In the passage cited by the Examiner, a change is made to a hardware device (i.e., the hardware device is removed from a vehicle) and a data structure is updated to delete an entry pertaining to the hardware device. In contrast, claim 30 recites ***updating the graphical interface when the hardware object or the software object are changed in the array-based environment.***

For at least the reasons stated above, Johnson and Gray, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 30. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claim 30 under 35 U.S.C. § 103(a).

Claims 31-33, 36, 42-43, and 57 depend from independent claim 30 and, as such, incorporate all of the features of claim 30. Accordingly claims 31-33, 36, 42-43, 57 are allowable for at least the reasons set forth above with respect to claim 30.

Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 31-33, 36, 42-43, and 57 under 35 U.S.C. § 103(a).

#### **H. Claims 44-47, 50, and 58**

Claims 44-47 and 48 are rejected under 35 U.S.C. §103(a) as being obvious over Johnson and Gray. Applicants respectfully traverse the rejection.

Independent claim 44 recites:

44. A computing device comprising:  
an array-based environment;  
a storage medium for storing and a processor for processing;  
a graphical interface, at least one hardware device and one software device  
being accessible through the graphical interface;

a plurality of hardware objects accessible to the computer, where each of the hardware objects represents a hardware device and is depicted in the graphical interface, each hardware object configured to be interactive with the hardware device;

a plurality of software objects, each representative of a software device accessible to the computer, where each of the software objects is depicted in the graphical interface and is configured to be interactive with the software device;  
and

a display device to display the plurality of hardware objects and the plurality of software objects and at least one configuration of one of the hardware objects or one of the software objects to a user in a single graphical interface simultaneously, *wherein the plurality of hardware objects and the plurality of software objects are accessible through both the array-based environment and the graphical interface.*

Applicants respectfully submit that Johnson and Gray, alone or in any reasonable combination, do not disclose or suggest at least *wherein the plurality of hardware objects and the plurality of software objects are accessible through both the array-based environment and the graphical interface*, which is present in claim 44.

As noted above, Johnson does not disclose interaction through an array-based environment. In Johnson, the GUI is “for guiding the user in specifying a measurement task” (Johnson at paragraph [0125]).

Indeed, Applicants have previously argued that Johnson teaches at paragraphs [0009]-[0010] that it is desirable for users to interact with a GUI instead of through some other interface (such as an array-based environment). Johnson teaches that the use of a non-GUI-based interface requires users to “specify and configure measurement tasks at an advanced level, which is time consuming, expensive, and prone to error” (Johnson at paragraph [0009]). Accordingly, Johnson teaches away from allowing the objects to be accessible through both *the array-based environment and the graphical interface*, which is present in claim 44.

The Examiner has not responded to this teaching away argument in the present Office Action. Applicants respectfully submit that one of ordinary skill in the art would not modify Johnson to interact with both an array-based environment and a graphical interface, because Johnson explicitly teaches that such an arrangement is “time consuming, expensive, and prone to error.”

In the Office Action at page 24, the Examiner asserts that Gray teaches that *the plurality of hardware objects and the plurality of software objects are accessible through both the array-based environment and the graphical interface*. However, as noted above, Gray is silent with respect to an array based environment.

For at least the reasons stated above, Johnson and Gray, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 44. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claim 44 under 35 U.S.C. § 103(a).

Claims 45-47, 50, and 58 depend from independent claim 44 and, as such, incorporate all of the features of claim 44. Accordingly claims 45-47, 50, and 58 are allowable for at least the reasons set forth above with respect to claim 44. Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 45-47, 50, and 58 under 35 U.S.C. § 103(a).

#### **I. Claims 34, 35, and 38**

Claims 34, 35, and 38 were rejected under 35 U.S.C. §103(a) as being obvious over Johnson, Gray, and Fuller. Applicants respectfully traverse the rejection.

Claims 34, 35 and 38 depend from claim 30 and, as such, include each and every feature of claim 30. As previously discussed, Johnson does not disclose or suggest *providing a graphical interface that provides interaction with an array-based environment nor updating the graphical interface when the hardware object or the software object are changed in the array-based environment*. As further noted above with respect to claim 30, Gray also does not disclose or suggest these features of claim 30.

Fuller also does not disclose or suggest *providing a graphical interface that provides interaction with an array-based environment* nor *updating the graphical interface when the hardware object or the software object are changed in the array-based environment*. As in Johnson, Fuller describes a system in which a user enters a change to be applied to the hardware object or the software object at the interface, and then the hardware object or the software object is updated in response. (Fuller at paragraph [0021]). This is not the same as *providing a graphical interface that provides interaction with an array-based environment* nor *updating the graphical interface when the hardware object or the software object are changed in the array-based environment*, as required in claim 30. In fact, this is the opposite of what is recited in claim 30. In claim 30, the hardware or software object changes and the interface is updated in response. In Fuller, the user enters a change into the interface and the hardware device is updated in response to the change in the interface.

Thus Fuller, Gray, and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 30. Therefore, Fuller Gray, and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claims 34, 35 and 38.

**J. Claims 48, 49, and 52**

Claims 48, 49 and 52 depend from claim 44 and, as such, include each and every feature of claim 44. Johnson and Gray, alone or in any reasonable combination, do not disclose or suggest *wherein the plurality of hardware objects and the plurality of software objects are accessible through both the array-based environment and the graphical interface* which is present in claim 44.

Fuller also does not disclose or suggest this feature. Fuller is silent as to the objects being accessible through both an array-based environment and a graphical interface.

Thus Fuller, Gray, and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 44. Therefore, Fuller, Gray, and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claims 48, 49 and 52.

**K. Claims 39, 40, 43, 53, and 54**

Claims 39, 40, 43, 53, and 54 were rejected under 35 U.S.C. §103(a) as being obvious in view of Johnson, Gray, and Schmit. Applicants respectfully traverse the rejection.

Claims 39, 40 and 43 depend from claim 30 and, as such, include each and every feature of claim 30. Johnson and Gray do not disclose or suggest *providing a graphical interface that provides interaction with an array-based environment* nor *updating the graphical interface when the hardware object or the software object are changed in the array-based environment*, which is present in claim 30.

Schmit also does not disclose or suggest this feature. As in Johnson and Fuller, Schmit describes a system in which a user enters a change to be applied to the hardware object or the software object at the interface, and then the hardware object or the software object is updated in response. (Fuller at [0013]). This is not the same as *providing a graphical interface that provides interaction with an array-based environment* nor *updating the graphical interface when the hardware object or the software object are changed in the array-based environment*. In claim 30, the hardware or software object changes and the interface is updated in response. In Schmit, the user enters a change into the interface and the hardware device is updated in response to the change in the interface.

Thus Schmit, Gray, and Johnson, alone or in any reasonable combination, do not disclose or suggest or suggest each and every feature of claim 30. Therefore, Schmit, Gray, and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claims 39, 40 and 43.

Claims 53 and 54 depend from claim 44 and, as such, include each and every feature of claim 44. Johnson and Gray, alone or in any reasonable combination, do not disclose or suggest *wherein the plurality of hardware objects and the plurality of software objects are accessible through both the array-based environment and the graphical interface*, which is present in claim 44.

Schmit also does not disclose or suggest this feature. Schmit is not concerned with allowing the objects to be accessible through an array-based environment. Accordingly, Schmit does not disclose *wherein the plurality of hardware objects and the plurality of software objects are accessible through both the array-based environment and the graphical interface*, as recited in claim 44.

Thus Schmit, Gray, and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 44. Therefore, Schmit, Gray, and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claims 53 and 54.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. §103(a) rejection of claims 39, 40, 43, 53, and 54.

**L. Claims 41, 42, and 55**

Claims 41, 42, and 55 are rejected under 35 U.S.C. §103(a) as being obvious over Johnson, Gray, and Pike. Applicants respectfully traverse the rejection.

Claims 41 and 42 depend from claim 30 and, as such, include each and every feature of claim 30. Johnson and Gray, alone or in any reasonable combination, do not disclose or suggest *providing a graphical interface that provides interaction with an array-based environment* nor *updating the graphical interface when the hardware object or the software object are changed in the array-based environment*, which are present in claim 30.

Pike also does not disclose or suggest these features. Pike describes communicating with a device in order to configure it. (Pike at [0027]). Pike describes that the user enters configuration data and then communicates back and forth with the device in order to change the configuration of the device itself. Pike does not describe *providing a graphical interface that provides interaction with an array-based environment* nor *updating the graphical interface when the hardware object or the software object are changed in the array-based environment*

Thus Pike, Gray, and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 30. Therefore, Pike, Gray and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claims 41 and 42.

Claim 55 depends from claim 44 and, as such, includes each and every feature of claim 44. Johnson and Gray do not disclose or suggest *wherein the plurality of hardware objects and the plurality of software objects are accessible through both the array-based environment and the graphical interface*, which is present in claim 44.

Pike does not disclose or suggest this feature. Pike is silent as to interaction with both an array-based environment and a GUI, and hence does not disclose or suggest *wherein the plurality of hardware objects and the plurality of software objects are accessible through both the array-based environment and the graphical interface*

Thus Pike, Gray and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 44. Therefore, Pike, Gray and Johnson, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 55.

**CONCLUSION**

In light of the above, Applicants respectfully submit that all of the pending claims are in condition for allowance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicants' attorney at (617) 227-7400.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-104RCE2. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

Dated: December 15, 2009

Respectfully submitted,

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